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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 19

Application Number: 09/262,628
Filing Date: March 04, 1999
Appellants: HORN et al.

Dorothy P. Whelan
For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 14, 2002.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement that there are no related appeals or interferences is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellants' statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellants' statement of the issues in the brief is substantially correct. The changes are as follows:

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- in the interest of simplifying the issues on appeal and advancing prosecution the rejections under 35 U.S.C. 112, first paragraph, for scope and 35 U.S.C. 102(b) are withdrawn.

- only the rejections of claims 1-4, 7, 8, 10 and 12-23, under 35 U.S.C. 112, first paragraph, based on written description, and under 35 U.S.C. 103(a) are at issue.

(7) *Grouping of Claims*

Appellants' brief includes a statement that claims 1-4, 7-8, 10 and 12-16 stand or fall together and that claims 17-23 stand or fall together. In view of the withdrawal of the rejection of record of claims 17-23 under 35 USC 102(b) the statement regarding claims 17-23 requires clarification by the appellants.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,461,133	HAMMAR	10-1995
4,323,956	PUSTKA	4-1982

The following prior art was made of record but not relied upon during prosecution to answer arguments raised by the appellants relating to the scope of polymers within the present claims and disclosure. As noted below the *POLYMER TECHNOLOGY DICTIONARY* reference was first cited in Paper No. 11 and the three US patents were cited in the attachment to Paper No. 13.

4,882,390	GROOTAERT (GROOTAERT '390)	11-1989
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4,035,565

APOTHEKER

7-1977

3,712,877

PATEL

1-1973

Whelan, T., *POLYMER TECHNOLOGY DICTIONARY*, First Ed., (1994), 161, Chapman & Hall (London).

(10) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

REJECTION UNDER 35 U.S.C. 112, FIRST PARAGRAPH

Claims 1-4,7,8,10 and 12-23 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. More directly, the term "fluoroplastic" which allegedly distinguishes the materials of the claimed articles and which is critical or essential to the practice of the invention, is not recited in the original claims or the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The term "fluoroplastic" was introduced by appellants in an amendment to the claims in Paper No. 10 following a rejection for obviousness over a primary reference, Hammar, which discloses orthodontic articles of fluoropolymers in "elastomer" or "elastomeric" form. As noted at page 161 of the *Polymer Technology Dictionary* the terms "fluoropolymer" and "fluoroplastic" relate to a genus and a species within the genus. More directly fluoropolymers are a genus comprising fluoroplastics and fluororubbers (fluoroelastomers). In order to defeat the Hammer reference appellants amended the claims by replacing "fluoropolymers" with "fluoroplastics" and cited the *Polymer Technology Dictionary* reference introduced by the examiner to show that the claimed invention now relates to an entirely different species of polymer. However, the amendment lacks support because the disclosure and the original claims

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are silent on fluoroplastics. Throughout the specification the only terms used to describe the claimed orthodontic articles are the generic terms "fluoropolymeric" and "fluoropolymer".

Conspicuously absent from appellants' argument is any showing that the claimed polymers are limited to or even comprise fluoroplastics. These omissions are particularly significant in view of the *Polymer Technology Dictionary* definition which discloses that fluoroplastics and fluororubbers can have the same generic chemical composition but which fails to set forth criteria for further differentiating fluoroplastics from fluororubbers. Note e.g. that fluorinated ethylene propylene copolymer is described by the reference in both the fluoroplastic and fluororubber forms. The key point is that the *Polymer Technology Dictionary* definition barely goes beyond identifying fluoroplastics and fluororubbers as species within a genus and appellants have not met the burden of showing they were in possession of the claimed fluoroplastic species.

Appellants' arguments filed in the brief have been fully considered but they are not persuasive.

Appellants state that the terms "fluoroplastic" and "fluoroelastomer" are generally understood to denote two different classes of fluoropolymers. In prior communications appellants have stated more directly that "...[t]hese rejections are premised upon the Examiner's mistaken belief that the terms "fluoropolymer", "fluoroplastic" and "fluoroelastomer" are somehow interchangeable and describe the same polymers." Paper No 12, last paragraph. For whatever reason appellants continue not to address the essential point of the rejection and to cloud the issue by stating that the issue is the examiner's inability to understand the terms "fluoropolymer", "fluoroplastic" and "fluoroelastomer". The argument is a red herring. It is

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crystal clear from the rejection and all the prior Office actions that fluoroplastics, fluoropolymers and fluoroelastomers are recognizable different terms. However, the real issue, the failure of appellants to meet the written description requirement of 35 USC 112, first paragraph, by properly disclosing fluoroplastic orthodontic articles has been obscured. In regard to this matter it is noted that the Board was not impressed by setting up a straw man and knocking it down. *In re Conix*, 160 USPQ 420.

Appellants state that the Background section of the application establishes that the invention is directed towards plastic orthodontic articles. Emphasis not added. However, the only mention of fluoroplastic articles in the application is in the claims amended after receipt of a rejection on the merits. It is deemed pertinent here that appellants admit that the term "fluoroplastic" is not used in the application but regard the admission irrelevant. Page 9, first complete paragraph, of the brief.

Appellants state that the polymers disclosed in the application are all classified "fluoroplastics" as shown e.g. by Grootaert, US 5,285,002 (Grootaert '002). The argument is an incomplete reading of Grootaert '002 which relates to fluoroelastomer articles and merely discloses some fluoroplastic polymers [column 1, lines 35-47] useful in articles other than those being claimed. Conspicuously absent from Grootaert '002 is any distinguishing feature among fluoropolymers and fluoroelastomers beyond that set forth in the *Polymer Technology Dictionary* definition. Thus, Grootaert '002 teaches fluoropolymers of the instant monomer content [column 5, lines 32-42; claims 3 and 4] which can be used to prepare articles outside the present claims in either fluoroplastic or fluoroelastomer form and which can also be used to prepare both classes of fluoropolymers disclosed in the *Polymer Technology Dictionary*. Stated

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otherwise Grootaert '002 merely confirms the observation made above that polymers within the present claims can exist in either fluoroelastomer or fluoroplastic form. In view of this fact, it is important to re-emphasize that lack of support for claiming articles in fluoroplastic form not the failure to recognize that the instant polymers can exist in different forms is the basis for the present ground of rejection.

REJECTION UNDER 35 U.S.C. 103(a)

Claims 1-4, 7, 8, 10 and 12-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammar et al., US 5,461,133, taken with Pustka, US 4,323,956.

Hammar teaches using the present fluoropolymers in orthodontic articles because of their physical properties, stain resistance and aesthetics [column 5, line 58 - column 6, line 37]. At column 6, lines 26-31 references disclosing suitable fluoroelastomers are disclosed. As noted in the attachment to Paper No. 13 the following U.S. Patents cited by Hammar teach fluoroelastomers within the present claims:

- US 4,882,390 (Grootaert '390), column 2, line 55 – column 3, line 29.
- US 3,712,877, paragraph bridging columns 1 and 2; column 3, lines 41-72.
- US 4,035,565, column 1, line 37 et seq.

Pustka teaches the suitability of fluoroplastic or fluorocarbon polymers in lighting fixtures because of their good physical and optical qualities [column 2, lines 50-66; column 4, line 32 - column 5, line 42]. Ethylene-tetrafluoroethylene copolymer and polychlorotrifluoroethylene, two of the polymers claimed by appellants, are disclosed [column 5, lines 32-42]. The polymers exhibit good transmittance qualities over the entire visible spectrum [column 4, lines 49-51], *i.e.* from about 400 to 800 nm, thereby encompassing the claimed 546 nm wave length. Pustka also

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teaches the vinylidenefluoride and tetrafluoroethylene polymers of Grootaert '390. While neither Hammar nor Pustka teaches the instant specific transmittance and color shift values there is a reasonable basis to believe that the properties are inherent because polymers of the same composition are known to exhibit good transmittance at the present wave length. Further, it is deemed pertinent that all of the instant fluoropolymers are chemicals of commerce used as received absent a showing on this record of treatment by appellants which would enhance transmittance or color shift. Accordingly, the optical properties of articles prepared from the fluoropolymers are deemed inherent and not to impact patentability. It is noted that appellants do not dispute this contention. Hammar differs from the claimed invention by failing to disclose the optical properties of the orthodontic articles.

It would have been obvious to prepare orthodontic articles of the instant fluoropolymers in the expectation of realizing the instant transmittance and color shift values because the polymers, their suitability for orthodontic articles and their advantageous optical properties over the entire visible spectrum were known at the time of the instant invention. Stated otherwise it would have been obvious to prepare the orthodontic articles of Hammar in the expectation of realizing enhanced optical properties because Pustka teaches that said properties are inherent in the same class of fluoropolymers as Hammar.

Appellants' arguments filed in the brief have been fully considered but they are not persuasive.

Appellants state that Hammar does not describe the specific fluoroplastics of the present claims. However, as noted above Hammar and the references incorporated therein disclose the

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present class of polymers and specific monomers. The disclosures are deemed sufficient to show obviousness. Specific claimed polymers are disclosed by Pustka

In response to the argument that there is no suggestion to combine the references because Pustka relates to light fixtures, it is recognized that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In the present case, Pustka teaches polymers of the same chemical composition as Hammar which have the physical and optical properties desired by appellant.

Appellants' argument that Hammar and Pustka relate to different articles and to polymers of different strength and resilience is an attack against the references individually as opposed to what the combination teaches. By way of reply:

- it is noted that the features upon which appellants rely (viz., specific orthodontic articles) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

- it is well settled that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As noted above, the combination of references teaches the genus and species of

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the claimed polymers, the suitability of said polymers for orthodontic articles, the desired optical properties and the ability to tailor the physical properties, *i.e.* the strength and resilience, of the polymers according to the need at hand. The combination is clearly *prima facie* obvious.

(11) *Response to Argument*

Appellants' arguments have been responded to in the *Grounds of Rejection*.

For the above reasons, it is believed that the rejections should be sustained.

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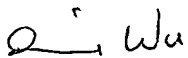
Respectfully submitted,



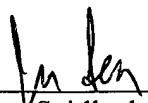
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